

ISAMPE National Conference on Composites (INCCOM 19)

Four Points by Sheraton, Pune

30 - 31 January 2025

Schedule of events – Day 1

08:00 - 09:00: Registration
09:00 - 12:00: Inaugural session

Venue: Grand Maratha Ballroom – ground floor	
09:00 - 09:10	Invocation
09:10 - 09:20	Welcome address: Dr. Makarand Joshi, Director, R&DE(E)
09:20 - 09:30	Address by ISAMPE President: Dr. A. Rajarajan, Director, SDSC
09:30 - 09:40	Address by Guest of Honor: Prof. Prateek Kishore, DG, ACE cluster
09:40 - 10:00	Inaugural address: Dr. Samir Kamat, Chairman, DRDO
10:00 - 10:30	Inauguration of exhibition (Ground floor + first floor)
10:30 - 11:00	High Tea (Pre-function area – first floor)
11:00 - 11:30	Platinum sponsor's session: Presentation by Dassault Systèmes
11:30 - 11:55	Key note address: Shri. Shekhar Sardesai, MD, Kinenco Limited
11:55 - 12:00	Vote of thanks: Dr. Mayur Godbole, Secretary, ISAMPE Pune chapter

Schedule of parallel technical sessions, 30 January 2025

Venue: Grand Maratha		Venue: Peshwa 3
Session 1 Chair: Shri. Vinu Viswanath, VSSC		Session 2 Chair: Dr. S. E. Talole, R&DE(E)
12:00-12:30	Upcycling post-consumer recycled plastics using vitrimers Invited talk, Dr. S. Bose, IISc	Tool design for composite airframe manufacturing Invited talk, Dr. K. Senthilnathan, NAL
12:30-12:45	Effect of MWCNT particles and CTBN rubber on the mechanical behaviour of bi-directional GFRP composites (Nilanjan Bharadwaj et al)	Material properties determination and numerical modelling of Kevlar/epoxy composites (Devnarayan Dhiwar et al)
12:45-13:00	Nonlinear damage modelling and experimental validation of nanoparticle-reinforced woven composite repairs (M. Kushwaha et al)	Numerical investigations on the hail ice impact damage of CFRP composite panels (Libin T. et al)
13:00-13:15	Effect of microwave irradiation time on the carbon nanotubes growth over the carbon fiber surface (Mohd Shadab Ansari et al)	Ballistic response prediction of unidirectional glass/epoxy composites under high-velocity impact with different projectile geometries (Shubham et al)
13:15-14:15	Lunch	

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Session 3 Chair: Dr. C. Ramadas, R&DE(E)		Session 4 Chair: Shri. N. Giridhar Singh, R&DE(E)	
14:15-14:45	Composites for high temperature applications in ISRO programmes: a brief overview (Invited talk, Shri. Vinu Viswanath, VSSC)	Advanced NDE methods for composite structures and bonded interfaces (Invited talk, Dr. K. Sreenivas, ASL)	
14:45-15:00	Fracture toughness estimation using machine learning (Sumeet Kumar Yadav et al)	Vibration based SHM of composite beams integrated with machine learning (Nisamudhin K. M. et al)	
15:00-15:15	A numerical study to understand the effect of stacking sequence and stress ratio on the fatigue behavior of GFRP composites (Ankur et al)	Efficient SHM of complex systems using delay embedding and bayesian filtering for sparse data reconstruction (O. A. Shereena et al)	
15:15-15:30	An adaptive mesh refinement strategy for localizing gradient damage approach to predict progressive failure in composites (A. Pandey et al)	Health monitoring of stiffened composite structure using AI and ML algorithm (Sayantan Kuila et al)	
15:30-15:45	Delamination induced fatigue life estimation of composite laminates: an exptl. and computational study (Y. Akkala et al)	Measuring crack propagation and crack front using distributed fiber optic sensor (Sahana S. et al)	
15:45-16:15	Tea Break		
16:15-16:30	Design and analysis of sandwich structure with aluminium honeycomb core and FRP facings for vibration isolation (Jasna P. H. et al)	2D image and convolution neural network-based approach for automated surface damage detection on aircraft surface (Augustin M. J. et al)	
16:30-16:45	Effect of flexibility on small satellite launch vehicle ogive payload fairing separation dynamics with dispersions (Kottresh Kurudimath M. et al)	A data-driven approach towards developing load classification and estimation to enhance aircraft SHM capabilities (Vijay Kumar A. et al)	
16:45-17:00	Neural network enhanced LaRC05 failure criteria for progressive damage modelling of CFRP (Y. Sai Krishna et al)	Improvement of insulation defects in composite casings (Tejasvi K. et al)	
17:00-17:15	Numerical approach to predict fatigue life of bi-directional carbon fiber reinforced polymer composites (Lokesh Raj et al)	Low-velocity impact localization on composite structure using piezoelectric paint sensor arrays and Gaussian likelihood model (A. Datta et al)	
18:00-19:30	Cultural events (Grand Maratha Ballroom)		
19:45 onwards	Conference dinner		

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Schedule of events – Day 2

Schedule of technical sessions, 31 January 2025	
Venue: Grand Maratha Ballroom – Ground floor	
Chair: Dr. Makarand Joshi, Director, R&DE(E)	
09:00-09:30	Keynote address: Cmde. Amit Ray, DND (SDG)
09:30-09:50	Presentation by Aditya Birla Group, Gold sponsor
09:50-10:10	Presentation by Kinenco Limited, Gold sponsor
10:10-10:30	Presentation by RR Industries, Gold sponsor

10:30 - 11:00: Tea break

11:00 - 11:30: Exhibition slot

Parallel sessions	
Venue: Grand Maratha	Venue: Peshwa 3
Session 5 Chair: Dr. Asha S. K., NCL	Session 6 Chair: Shri. D. B. Pedram, R&DE(E) (Rtd.)
11:30-12:00	11:30-12:00
Design of composites for aircraft structural assembly (Invited talk, Shri. TCS Reddy, ADA)	Airworthiness and certification of airborne materials (Invited talk, Ms. C. M. Bhuvaneshwary, CEMILAC)
12:00-12:15	12:00-12:15
Vibration suppression of 3D printed beam through metastructure (K. Egbert et al)	Experimental and numerical study on free vibration analysis of composite laminated shell (Shubham Dutta et al)
12:15-12:30	12:15-12:30
Seawater aging effects on charpy impact energy of 3D printed thermoplastic materials (Prince Shukla et al)	Experimental determination of Mode-I fracture toughness of double cantilever sandwich beam having CFRP face sheet and NOMEX® (Nirmanyu Goel et al)
12:30-12:45	12:30-12:45
Tailoring the resin formulation to realize optimum process viscosity time for fabrication of quartz- cyanate ester components (Kavitha V. Rao et al)	Experimental investigation of boundary-condition effect in low velocity impact on CFRP fabricated using tailored fiber placement technique (Bhaskar Shukla et al)
12:45-13:00	12:45-13:00
Optimisation of polymer-based octet lattice structures via Taguchi method (Shruti Gupta et al)	Effect of moisture ingress on the dynamic compressive properties of UHMWPE composites (Hemant Chouhan et al)
13:00-14:00	13:00-14:00
Lunch	

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Session 7 Chair: Dr. Kiran Akella, R&DE(E)		Session 8 Chair: Dr. R. Harshe, R&DE(E)	
14:00-14:30	Recyclable carbon fibre composites for filament winding application (Invited talk, Dr. Asha S. K., NCL)	Impact energy absorption using fiber parallel to projectile impact direction (Invited talk, Prof. Chandra Sekher, IIT B)	
14:30-14:45	Effect of resin delivery system on VARTM processing (Manoj Dhiman et al)	Fatigue behavior and damage mechanism of non-crimp GFRP composites (Ateeb Ahmad Khan et al)	
14:45-15:00	3D Printed composite of microwave treated aramid fibers (Amol Balasaheb Indalkar et al)	Suppression of fatigue crack initiation and propagation on a free surface of Aluminium (Prashant Kumar et al)	
15:00-15:15	Challenges in processing of high temperature carbon polyimide composites for aeroengine application (Kundan Kr Verma et al)	Experiments on fatigue performance of thin pre-cracked panel repaired with riveted metallic patch and bonded CFRP patch (Prakash S. Shinde et al)	
15:15-15:45	Tea Break		
Session 9 Chair: Shri. TCS Reddy, ADA		Session 10 Chair: Dr. C. Ramadas, R&DE(E)	
15:45-16:15	Out of autoclave composites manufacturing processes Invited talk, Dr. R. Harshe, R&DE(E)	Non-local approaches for modeling damages in composites Invited talk, Prof. A. Rajagopal, IIT Hyd	
16:15-16:30	Development of electrically conductive fiber-reinforced polymer composites for cutting-edge applications (P. Bairi et al)	Fatigue life estimation of neat epoxy polymer under high cycle loads – an experimental and computational study (B. A. Wani et al)	
16:30-16:45	Evaluation of post-performance behaviour of repaired glass epoxy composites subjected to drop weight test (Sivagangai T. et al)	Fracture and delamination behaviour in multi-angular carbon fiber reinforced polymer composites (CFRPs) under mode II loading (Viswarupachari C. H. et al)	
16:45-17:00	Weight reduction and flexibility improvement possibilities in body armors using biomimicry (M. Ghowtham et al)	Thermo-mechanical behaviour of 155 mm Gun Barrel with variable metal-composite thickness through FE simulations (Chandan Kumar et al)	
17:00-17:15	In plane shear properties of thermal aged and thermal cycled carbon polyimide composite (Sugavaneswaran M. et al)	Boosting the green EMI shielding by defect driven microstructure manipulations (Rohit S. Nair et al)	
17:15-18:00	Valedictory (Grand Maratha Ballroom)		